

Biographical Sketch

Darryn W Waugh
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PROFESSIONAL PREPARATION

<u>College/University</u>	<u>Major</u>	<u>Degree & Year</u>
University of Waikato, N.Z.	Mathematics	BSc, 1985
University of Waikato, N.Z.	Mathematics	MSc, 1987
University of Cambridge, U.K.	Applied Mathematics	PhD, 1991
M.I.T.	Atmospheric Sci.	1992-1994

ACADEMIC/PROFESSIONAL APPOINTMENTS

- Jan. 07 to present - Johns Hopkins University; Chair of E&PS
Jul. 04 to present - Johns Hopkins University; Professor.
Jan. 01 to Jun. 04 - Johns Hopkins University; Associate Professor.
Jan. 98 to Dec. 00 - Johns Hopkins University; Assistant Professor.
Jan. 95 to Dec. 97 - Monash University, Australia; Research Fellow

SYNERGISTIC ACTIVITIES

- Member of AMS Middle Atmosphere committee (1999-2004; Chairperson (2001-2004) and the International Commission on the Middle Atmosphere (1999-)
- Lead author of 2010 SPARC "CCMVal Report on Evaluation of Chemistry-Climate Models".
- Lead author of chapter 6 of 2006 WMO/UNEP "Scientific Assessment of Ozone Depletion"
- Co-author of chapter 7 of 1998 WMO/UNEP "Scientific Assessment of Ozone Depletion"
- Lead author of chapter 2 of 1998 NASA "Scientific Assessment of the Atmospheric Effects of Stratospheric Aircraft"

HONORS

- 2006 AGU Editors Citation for Excellence in Refereeing
2001 NASA Group Achievement Award for SOLVE campaign
1999 AGU Editors Citation for Excellence in Refereeing.
1998 NASA Group Achievement Award for POLARIS campaign
1995 AGU Editors Citation for Excellence in Refereeing.
1995 NASA Group Achievement Award for ASHOE/MAESA campaign.
1993 Francois N. Frenkiel award,
1990 J.T. Knight Prize, Cambridge UK.
1998 U.K. Commonwealth Scholarship, University of Cambridge UK..

PUBLICATIONS

Publications selected from 95 peer-reviewed publications:

- Oman, L., D. W. Waugh, S. Pawson, R. S. Stolarski, and P. A. Newman, On the influence of anthropogenic forcings on changes in the stratospheric mean age, *J. Geophys. Res.*, 114, D03105, 2009.
- Ryoo, J.-M., T. Igusa, D.W. Waugh, PDFs of Tropical Tropospheric Humidity: Measurements and Theory, *J Climate*, 22, 3357-3373, 2009.
- Son, S-W. L.M. Polvani, D.W. Waugh, et al., The impact of stratospheric ozone recovery on tropopause height trends, *J. Climate*, to appear, 2009.
- Waugh, D. W., L. Oman, P. A. Newman, R. S. Stolarski, S. Pawson, J. E. Nielsen, and J. Perlitz (2009), Effect of zonal asymmetries in stratospheric ozone on simulated Southern Hemisphere climate trends, *Geophys. Res. Lett.*, 36, L18701, doi:10.1029/2009GL040419.
- Son, S-W., N. Tandon, L.M. Polvani, D.W. Waugh, Ozone hole and southern hemisphere climate, *Geophys. Res. Lett.*, 36, L15705, 2009.
- Waugh, D.W., The age of stratospheric air, *Nature Geosciences*, 2, 14 – 16, 2009.
- Waugh, D. W., L. Oman, S. R. Kawa, R. S. Stolarski, S. Pawson, A. R. Douglass, P. A. Newman, and J. E. Nielsen, Impacts of climate change on stratospheric ozone recovery, *Geophys. Res. Lett.*, 36, L03805, doi:10.1029/2008GL036223, 2009.
- Ryoo, J.M, D.W. Waugh, A. Gettelman, Variability of Subtropical Upper Tropospheric Humidity, *Atmos. Chem. Phys.*, 8, 2643-2655, 2008.
- Son, S.-W., L. M. Polvani, D. W. Waugh, et al., The Impact of Stratospheric Ozone Recovery on the Southern Hemisphere Westerly Jet, *Science*, 320, 1486-1489, 2008.
- Waugh, D. W., and E. R. Abraham, Stirring in the global surface ocean, *Geophys. Res. Lett.*, 35, L20605, doi:10.1029/2008GL035526, 2008.
- Waugh, D.W., and V. Eyring, Quantitative performance metrics for stratospheric-resolving chemistry-climate models, *Atmos. Chem. Phys.*, 8, 10873-10911, 2008
- Waugh, D.W., S. E. Strahan, and P. A. Newman, Sensitivity of stratospheric inorganic chlorine to differences in transport, *Atmos. Chem. Phys.*, 7, 4935-4941, 2007
- Eyring, V., D.W. Waugh et al. Multi-model projections of stratospheric ozone in the 21st Century, *J. Geophys. Res.*, D16303, doi:10.1029/2006JD008332, 2007.
- Tanhua T., A. Körtzinger, K. Friis, D. W. Waugh, and D. W. R. Wallace, An estimate of anthropogenic CO₂ inventory from decadal changes in oceanic carbon content, *Proceedings of National Academy Sciences*, 104: 3017-3018, 2007.
- Funatsu, B.M., and D. W. Waugh Connections between Potential Vorticity Intrusions and Convection in the Eastern Tropical Pacific, *J. Atmos. Sci.*, 2007.
- Waugh, D.W., Hall, T. M., B. McNeil, and R. Key, Anthropogenic CO₂ in the oceans estimated using transit-time distributions, *Tellus*, 58B, 376-389, 2006.
- Polvani, L.M. and Waugh D.W., Upward Wave Activity Flux as Precursor to Extreme Stratospheric Events and Subsequent Anomalous Surface Weather Regimes, *J. Climate*, 17, 3548-3554, 2004.
- Waugh, D. W., and T. M. Hall Age of stratospheric air: theory, observations, and models, *Rev. Geophys.*, 40 (4), 10.1029/2000RG000101, 2002.
- Waugh, D.W. and Plumb, R.A., Contour Advection with Surgery: A technique for investigating fine scale structure in tracer transport. *J. Atmos. Sci.*, 51, 530-540, 1994.